

SUMMARY

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below. Applicants hereby petition for an extension of time which may be required to maintain the pendency of this case, and any required fee for such extension or any further fee required in connection with the filing of this Amendment is to be charged to Deposit Account No. 50-0388 (Order No. LAM1P128).

Respectfully submitted

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31. (Twice Amended) A method for controlling processing uniformity while processing a substrate using a plasma-enhanced process, comprising:

providing a plasma processing chamber having a single chamber, substantially [azimuthally] azimuthally symmetric configuration within which a plasma is both ignited and sustained during said processing of said substrate, said plasma processing chamber having no separate plasma generation chamber;

providing a coupling window disposed at an upper end of said plasma processing chamber;

providing an RF antenna arrangement disposed above a plane defined by said substrate when said substrate is disposed within said plasma processing chamber for said processing;

providing an electromagnet arrangement disposed above said plane defined by said substrate, said electromagnet arrangement being configured so as to result in a radial variation in the controlled magnetic field within said plasma processing chamber in the region proximate to said coupling window and antenna when at least one direct current is supplied to said electromagnet arrangement, said radial variation being effective to affect density of said plasma in said region proximate to said coupling window and antenna [processing uniformity across said substrate];

providing a dc power supply coupled to said electromagnet arrangement;

placing said substrate into said plasma processing chamber;

flowing reactant gases into said plasma processing chamber, said reactant gases include a combination of gases, wherein two or more gases of said combination of gases included in said reactant gases is a $C_x F_y H_z O_w$ gas;

striking said plasma out of said reactant gases; and

changing said radial variation in said controlled magnetic field within said plasma processing chamber in said region proximate to said antenna to [improve] control said density of said plasma when said reactant gases are being flown in said plasma processing and thereby improving [said] processing uniformity across said substrate chamber.